Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended)   In a data communication network supporting data compression, a method for optimizing compression efficiency, comprising:

filtering protocol-specific header and control information of a protocol data unit (PDU) to determine compressibility of the contents of said protocol data unit including determining if a given protocol data unit is associated with a previously filtered protocol data unit;

based on the result of said filtering, selecting the state of data link compression for said protocol data unit to optimize compression efficiency such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected; and

associating the selected state of data link compression with the protocol data unit to ~~enable or disable~~ control a compression process adapted to compress contents of protocol data units ~~in an adaptive manner~~.

2.   (Original)   The method as claimed in claim 1, further including compressing the contents of the protocol data unit as a function of the state of data link compression.

3.   (Original)   The method as claimed in claim 2, wherein compressing the contents of the protocol data unit includes applying an indication in or with the compressed protocol data unit to indicate whether the contents of the protocol data unit have been compressed.

4.   (Original)   The method as claimed in claim 3, further including decompressing the compressed contents of the protocol data unit.

5.   (Original)   The method as claimed in claim 4, wherein, based on the indication of whether the contents of the protocol data unit have been compressed, decompressing the compressed contents of the protocol data unit is performed in a manner previously negotiated.

6.   (Original)   The method as claimed in claim 1, further including accessing a table having entries with specific media types deemed compression limited.

7.   (Original)   The method as claimed in claim 1, wherein filtering includes associating individual protocol data units to a specific media type.

8.   (Cancelled)

9.   (Currently Amended)   The method as claimed in claim 1 8, wherein determining includes accessing a table including information of previously filtered protocol data units.

10.   (Original)   The method as claimed in claim 1, wherein selecting the state of the data link compression includes disabling the data link compression if the compressibility of the contents of the protocol data unit is determined to be low.

11.   (Original)   The method as claimed in claim 1, wherein selecting the state of the data link compression includes enabling the data link compression if the compressibility of the contents of the protocol data unit is determined to be high.

12.   (Original)   The method as claimed in claim 1, further including initializing a table used by the data link compression with data patterns expected to

be contained in the content of said protocol data unit.

13.   (Currently Amended)   In a data communication network supporting data compression, an apparatus for optimizing compression efficiency, comprising:

a filter of protocol-specific header and control information of a protocol data unit (PDU) <u>configured</u> to determine compressibility of the contents of said protocol data unit <u>including determining if a given protocol data unit is associated with a previously filtered protocol data unit</u>; and

a selector coupled to the output of the filter <u>and configured</u> to (i) select the state of data link compression for the protocol data unit to optimize compression efficiency <u>such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected</u> and (ii) to associate the selected state of data link compression with the protocol data unit to ~~enable or disable~~ <u>control</u> a compressor adapted to compress <u>contents of</u> protocol data units~~in an adaptive manner~~.

14.   (Currently Amended)   The apparatus as claimed in claim 13, further including a compressor ~~responsive to the state of data link compression~~ <u>configured</u> to compress the contents of the protocol data unit <u>responsive to the state of data link compression</u>.

15. (Currently Amended) The apparatus as claimed in claim 14, wherein the compressor ~~includes~~ is configured to include an indication in or with the compressed protocol data unit to indicate whether the contents of the protocol data unit have been compressed.

16. (Currently Amended) The apparatus as claimed in claim 15, further including a decompressor <u>configured</u> to decompress the compressed contents of the protocol data unit.

17. (Currently Amended) The apparatus as claimed in claim 16, wherein, ~~based on the indication of whether the contents of the protocol data unit have been compressed,~~ the decompressor ~~decompresses~~ <u>is configured to decompress</u> the contents of the protocol data unit in a manner previously negotiated with the compressor <u>based on the indication of whether the contents of the protocol data unit have been compressed</u>.

18. (Original) The apparatus according to claim 13, wherein the selector includes a table ~~having~~ <u>configured to store</u> entries with specific media types deemed compression limited.

19. (Currently Amended)   The apparatus as claimed in claim 13, wherein the filter ~~further associates~~ is configured to associate individual protocol data units to a specific media type.

20. (Currently Amended)   The apparatus as claimed in claim 19, wherein the filter further includes a tracking unit to determine if a given protocol data unit is associated with a previously filtered protocol data unit ~~and, if so, assigns the same state of data link compression for the given protocol data unit as for the previously filtered protocol data unit~~.

21. (Currently Amended)   The apparatus as claimed in claim 20, wherein the filter further includes a table ~~having~~ configured to store information of previously filtered protocol data units.

22. (Currently Amended)   The apparatus as claimed in claim 13, wherein the selector ~~disables~~ is configured to disable the compressor ~~data link compression~~ if the compressibility of the contents of the protocol data unit is determined to be low.

23.   (Currently Amended)   The apparatus as claimed in claim 13, wherein the selector ~~enables~~ is configured to enable the compressor ~~data link compression~~ if the compressibility of the contents of the protocol data unit is determined to be high.

24.   (Currently Amended)   The apparatus as claimed in claim 13, further including an initialization unit <u>configured</u> to initialize a table used by the compressor ~~data link compression~~ with data patterns expected to be contained in the content of said protocol data unit.

25.   (Currently Amended)   In a data communication network supporting data compression, an apparatus for optimizing compression efficiency, comprising:

means for filtering protocol-specific header and control information of a protocol data unit to determine compressibility of the contents of said protocol data units <u>including means for determining if a given protocol data unit is associated with a previously filtered protocol data unit</u>;

~~based on the results of said filtering,~~ means for selecting the state of data link compression for said protocol data unit <u>based on the results of said filtering</u> to optimize compression efficiency <u>such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression</u>

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for the previously filtered protocol data unit is selected; and

means for associating the selected state of data link compression with the protocol data unit to ~~enable or disable~~ control a compression process adapted to compress contents of protocol data units ~~in an adaptive manner~~.

26.   (Original)   The apparatus as claimed in claim 25, further including means for compressing the contents of the protocol data unit based on the state of data link compression.

27.   (Original)   The apparatus as claimed in claim 26, further including means for decompressing the contents of the protocol data unit in a manner previously negotiated with the compressor.

28.   (Currently Amended)   A computer-readable medium having stored thereon sequences of instructions, the sequences of instructions including instructions, when executed by a processor, ~~causes~~ configured to cause the processor to perform:

filtering protocol-specific header and control information of a protocol data unit to determine compressibility of the contents of said protocol data unit including determining if a given protocol data unit is associated with a previously filtered

protocol data unit;

~~based on the results of said filtering,~~ selecting the state of data link compression for said protocol data unit <u>based on the results of said filtering</u> to optimize compression efficiency <u>such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected</u>; and

associating the selected state of data link compression with the protocol data unit to ~~enable or disable~~ <u>control</u> a compression process adapted to compress <u>contents of</u> protocol data units ~~in an adaptive manner~~.

29.   (Currently Amended)   In a data communication network supporting data compression, a method for optimizing compression efficiency, comprising:

without changes to a subordinate protocol layer or changes to the higher protocol layers <u>carried by a given protocol data unit</u> ~~it carries~~, selectively controlling the state of a compression algorithm based on a protocol-specific header and control information of ~~a~~ <u>the given</u> protocol data unit <u>or a compressibility determination of a protocol data unit associated with the given protocol data unit</u> to determine compressibility for compressing data transported by <u>the given</u> protocol data <u>unit</u> ~~units~~ across a connection in the data communication network to optimize the compression efficiency <u>such that if a compressibility determination of a protocol</u>

data unit associated with the given protocol data unit is provided, the same compressibility determination is made for the given protocol data.

30.   (Original)   The method as claimed in claim 29, wherein selectively controlling the state of the compression algorithm enables or disables the compression algorithm.

31.   (Original)   The method as claimed in claim 29, wherein selectively controlling the state of the compression algorithm includes analyzing protocol-specific header and control information of the protocol data units of the higher protocol layers.